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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,718	10/17/2003	Yasumitsu Ikegami	040853.01	8820
25944 7590 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER NGUYEN, TAI V	
			ART UNIT 3729	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/17/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/686,718

Applicant(s)

IKEGAMI, YASUMITSU

Examiner

Tai Van Nguyen

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,10 and 11 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,8,9 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/142,464.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/17/03</u> | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3729

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following title is suggested: A METHOD FOR MANUFACTURING A PIEZOELECTRIC RESONATOR.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, 5, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinaga (US 5,184,043) in view of Yoshida (US 5,444,326).

As applied to claims 1, 4 and 10, Kasai discloses a method for manufacturing a piezoelectric resonator, comprising: attaching a piezoelectric resonator element (1, Fig. 3) comprising a piezoelectric body (2) having electrodes (5, 6) disposed thereon, to a plurality (20, 30) of leads which connect the piezoelectric resonator element mechanically to a supporting member and permit electrical connection thereof; providing a gap between the supporting member (22, 32) and the piezoelectric resonator element; each the flat leading end portion being connected substantially in parallel with the electrode and having a substantially U-shaped edge (21, 31) which opens toward a

Art Unit: 3729

leading end thereof, the piezoelectric resonator element being attached to the substantially U- shaped edge, on a side of the piezoelectric resonator element which faces the leads, so that an edge of the piezoelectric resonator element on the side which faces the leads may be positioned on the substantially U-shaped edge (column 4, lines 1-48).

However, Yoshinaga does not disclose forming a connecting layer of a conductive resin between an electrode and a flat leading end portion of each of the leads.

Yoshida teaches that a connecting layer of a conductive resin (30, Fig. 9) can be formed between an electrode (22) and a flat leading end portion (26, 27) of each of the leads.

As applied to claim 5 and 11, Yoshinaga discloses further comprising forming a reinforcing layer with a conductive resin or a non-conductive resin coated so as to cover at least the connecting layer and the leading end portions of the leads (column 4, lines 1-23).

As applied to claim 7, Yoshinaga discloses a method for manufacturing a piezoelectric resonator unit comprising: attaching a piezoelectric resonator element (1, Fig. 3) comprising a piezoelectric body (2) having electrodes (5, 6) disposed thereon, to a plurality of leads (20, 30) which connect the piezoelectric resonator element mechanically to a supporting member (22, 32) and permit electrical connection thereof; providing a gap between said supporting member and the piezoelectric resonator element; each the flat leading end portion being connected substantially in parallel with

Art Unit: 3729

said electrode having a substantially U-shaped (21, 31) edge which opens toward a leading end thereof; inserting the piezoelectric resonator element connected to the supporting member into a hollow protector; and sealing (50) the piezoelectric resonator within the supporting member and the protector, the piezoelectric resonator element being attached to the substantially U- shaped edge on a side facing the leads, so that an edge of the piezoelectric resonator element on the side facing the leads may be positioned on the substantially U-shaped edge (column 4, lines 1-48).

It would have been obvious to one of ordinary skill in the art at this time the invention was made to have modified the method of Yoshinaga by including forming a connecting layer of a conductive resin between an electrode and a flat leading, as taught by Yoshida, to positively design a piezoelectric resonator device that consumes smaller power (column 3, lines 21-23).

#### ***Allowable Subject Matter***

5. Claims 2, 3, 6, 8, 9 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Art Unit: 3729


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN. December 27, 2006



A. DEXTER TUGBANG  
PRIMARY EXAMINER